

What is claimed is:

- 1 1. In a booster circuit wherein energy is stored in an inductor when a switching element is
2 on and said energy is superposed onto an input voltage to charge a capacitor disposed at an
3 output side when said switching element is off,
4 a booster circuit comprising:
5 detecting means detecting said input voltage and an actual booster voltage on said
6 capacitor side;
7 target booster setting means setting a target booster voltage;
8 duty ratio setting means setting a duty ratio so that deviation between said target
9 booster voltage and said actual booster voltage is eliminated; and
10 controlling means calculating a correction value based on an input voltage change
11 obtained from said input voltage, correcting said duty ratio with said correction value, and
12 performing feedback control based on said corrected duty ratio by turning said switching
13 element on and off.
- 1 2. A booster circuit as described in claim 1 wherein said correction value is a ratio between
2 an input voltage change calculated from said input voltage and said target booster voltage.
- 1 3. A booster circuit as described in claim 1 wherein said correction value is a ratio between
2 an input voltage change calculated from said input voltage and said actual booster voltage.
- 1 4. In a method for controlling a booster circuit wherein energy is stored in an inductor when
2 a switching element is on and said energy is superposed onto an input voltage to charge a
3 capacitor disposed at an output side when said switching element is off, a method for
4 controlling a booster circuit comprising:
5 detecting said input voltage and an actual booster voltage on said capacitor side;
6 setting a target booster voltage;
7 setting a duty ratio to eliminate a deviation between said target booster voltage and
8 said actual booster voltage;
9 calculating a correction value based on an input voltage change obtained from said
10 input voltage; and
11 performing feedback control by turning on and off said switching element based

12 on a new duty ratio formed by correcting said duty ratio with said correction value.

1 5. A method for controlling a booster circuit as described in claim 4 wherein said correction
2 value is a ratio between said input voltage change calculated based on said input voltage
3 and said target booster voltage.

1 6. A method for controlling a booster circuit as described in claim 4 wherein said correction
2 value is a ratio between said input voltage change calculated based on said input voltage
3 and said actual booster voltage.

1 7. A booster circuit as described in claim 2 wherein said controlling means comprises a
2 correcting means for calculating said correction value.

1 8. A booster circuit as described in claim 7 wherein said correcting means is a booster
2 control module.

1 9. A booster circuit as described in claim 5 wherein said controlling means comprises a
2 correcting means for calculating said correction value.

1 10. A booster circuit as described in claim 9 wherein said correcting means is a booster
2 control module.

1 11. A booster circuit as described in claim 3 wherein said controlling means comprises a
2 correcting means for calculating said correction value.

1 12. A booster circuit as described in claim 11 wherein said correcting means is a booster
2 control module.

1 13. A booster circuit as described in claim 6 wherein said controlling means comprises a
2 correcting means for calculating said correction value.

1 14. A booster circuit as described in claim 13 wherein said correcting means is a booster
2 control module.